

**BUREAU OF HIGHWAYS
REQUEST FOR PROPOSAL
for
QUALIFICATIONS BASED SELECTION FOR PREQUALIFIED SERVICES**

The Michigan Department of Transportation (MDOT) is seeking professional services for the project contained in the attached scope of services.

If your firm is currently prequalified for this type of work and you are interested in providing services, please indicate your interest by submitting a Proposal. The Proposal must be submitted in accordance with the latest "Vendor Selection Guidelines for Service Contracts", available on the MDOT website.

For efficiency sake, we are asking that the vendor firm provide 4 paper copies of the Proposal to the MDOT project manager named in the attached scope of services.

These copies must be received by April 4, 2005. Fax and electronic copies are not acceptable.

In addition, provide one unbound copy to:

Regular Mail:

Secretary, Operations Contract Support
Michigan Department of Transportation
P.O. Box 30050
Lansing, MI 48909

OR

Overnight Mail:

Secretary, Operations Contract Support
Michigan Department of Transportation
425 W. Ottawa
Lansing, MI 48933

This copy is to be received within three working days after the due date and time specified above. Please do not deliver in person.

Any questions relative to the scope of services must be submitted by e-mail to the MDOT project manager. Any questions must be asked at least three working days prior to the due date and time specified above. All questions and their answers will be placed on the MDOT website as soon as possible after receipt of the questions. The names of vendors submitting questions will not be disclosed.

For a cost plus fixed fee contract, the selected vendor must have a cost accounting system to support a cost plus fixed fee contract. This type of system has a job-order cost accounting system for the recording and accumulation of costs incurred under its contracts. Each project is assigned a job

number so that costs may be segregated and accumulated in the vendor's job-order accounting system.

The selection team will review the information submitted and will select the firm considered most qualified to perform the engineering services based on the proposals. The selected vendor will be contacted to confirm capacity. Upon confirmation, that firm will be asked to prepare a priced proposal. Negotiations will be conducted with the firm selected.

The maximum allowable pages for your proposal shall follow the guidelines detailed in Exhibit F of the Vendor Selection Guidelines (October 2004) for \$100,000 to \$500,000.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

The scope of services is attached to this solicitation.

SCOPE OF DESIGN SERVICES

PROJECT LOCATION: US-41 BR (Washington Street) from Rublien Street to Fifth Street in the City of Marquette, Marquette County

CONTROL SECTION, JOB NUMBER: CS 52044 – JN 60515

GENERAL INFORMATION

The MDOT Project Manager for this project will be:

Robert T. Tervo, PE
100 South Westwood Drive
Ishpeming, MI 49849
(906) 485-4270
FAX: (906) 485-4878
TervoR@michigan.gov

I. Primary Prequalification Classification:

Road & Street Design

II. Secondary Prequalification Classification:

Maintaining Traffic Plans & Provisions
Road Design Surveys
Traffic Signal Design
Hydraulics
Municipal Utilities Design
Pavement Marking Plans
Permanent Non-Freeway Traffic Signing

The anticipated start date of the service is June 8, 2005.

The anticipated completion date for the service is May 1, 2006.

DBE Requirement: 10%

SCOPE OF DESIGN SERVICES
CS 52044 – JN 60515C
US-41 BR (Washington St), City of Marquette
Rublien to Fifth Street

I. SCOPE OF CONSULTANT DUTIES

Complete the design of this project including, but not limited to the following:

- A. Perform design surveys.
- B. Perform roadway geotechnical investigation.
- B. Perform a drainage study and related design.
- C. Prepare required plans, typical cross-sections, details, and specifications required for design and construction.
- D. Compute and verify all plan quantities.
- E. Prepare staging plans and special provisions for maintaining traffic during construction.
- F. Prepare pavement marking plans and special provisions.
- G. Prepare traffic signal plans and special provisions.
- H. Prepare permanent signing plans and special provisions for non-freeway sign upgrading.
- I. Prepare Right-Of-Way plans as required to locate, verify and purchase real estate and/or obtain construction access permits for this project.
- J. Provide solutions to any unique problems that may arise during the design of this project.
- K. The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

II. PROJECT LOCATION

The project is located on the US-41 BR, Washington Street, from Rublien Street to Fifth Street in the City of Marquette, Marquette County. The project length is approximately 1 mile.

III. PROJECT DESCRIPTION

This project consists of all work related to designing this complete reconstruction project, including but not limited to the following: Pavement structure replacement, storm sewer replacement and/or upgrade, new curbs, sidewalks, HMA paving, drainage improvements, safety improvements, traffic signal upgrading, and other miscellaneous items of work.

Work shall conform to current MDOT, FHWA, and AASHTO practices, guidelines, policies, and standards (i.e., Road Design Manual, Standard Plans, Drainage Manual, Roadside Design Guide, A Policy on Geometric Design of Highways and Streets, Michigan Manual of Uniform Traffic Control Devices, etc.).

IV. PROJECT CONSTRUCTION COST

A. The estimated cost of construction is:

1.	Safety Related Work	\$ 100,000
2.	Base, Surface and Shoulder	\$1,000,000
3.	Non-Motorized	\$ 150,000
4.	Drainage Adjustment and Improvement	\$ 500,000
5.	Detours and Maintaining Traffic	\$ 100,000
6.	Permanent Pavement Markings/Signs/Signals	\$ 50,000
7.	Miscellaneous	<u>\$ 100,000</u>
	CONSTRUCTION TOTAL	\$2,000,000

B. The estimated cost of real estate is: \$ 5000.00

The above construction total is the amount of funding programmed for this project. The Consultant is expected to design the project within the programmed amount.

If at any time the estimated cost of construction varies by more than 5% of the current programmed amount, then the Consultant will be required to submit a letter justifying the changes in the construction cost estimate.

In addition to the estimated cost of construction listed above, the city of Marquette will also be making water and sewer system improvements as part of this project with an estimated cost of \$1,000,000. The city of Marquette will perform their own design for the water and sewer improvements, but the Consultant for this project will be expected to incorporate these work items into the plans and contract documents.

V. PROJECT SCHEDULE

The scheduled Consultant's plan completion date for this project is 03/31/2006. The Consultant shall use the following events to prepare the proposed implementation schedule as required in the Guidelines for the Preparation of Responses on Assigned Design Services Contracts. These dates shall be used in preparing the Consultant's Monthly Progress Reports.

<u>Target</u>		
<u>Date</u>	<u>Task #</u>	<u>Description</u>
	3330	Conduct Design Survey
7/22/2005		Submit Survey Final Deliverables
	3360	Prepare Base Plans
8/05/2005		Submit Base Plans
	3361	Submittal of Preliminary Right-Of-Way Plans
8/10/2005	3380	Review Base Plans
	3390	Develop the Construction Zone Traffic Control Concepts
	3510	Perform Roadway Geotechnical Investigation
7/22/2005		Submit Geotechnical Report
	3522	Conduct Drainage Study, Storm Sewer Design, and Structural Best Management Practices (BMP's)
8/31/2005		Submit Plans for Utility Review (approximately 50% complete)
10/1/2005		Submit Environmental Permit Information
	3540	Develop Construction Zone Traffic Control Plan
	3551	Perform/Review Traffic Signal Operations Plan
	3552	Develop Preliminary Permanent Pavement Marking Plan
	3553	Develop Preliminary Non-Freeway Signing Plan
	3580	Develop Preliminary Plans
10/07/2005		Submit Preliminary Plans
	3581	Final Right-Of-Way Plans
11/11/2005	3590	Review Preliminary Plans (The Plan Review)
	3670	Develop Municipal Utility Plans
	3675	Develop Electrical Plans
	3680	Obtain Required Municipal Utility Permits
	3821	Complete/Review Traffic Signal Plans
	3822	Complete Permanent Pavement Marking Plan
	3823	Complete Non-Freeway Signing Plan
	3830	Complete the Construction Zone Traffic Control Plan
	3840	Develop Final Plans and Specifications
	3850	Develop Structure Final Plans and Specifications
02/22/2006		Submit Final Plan/Proposal Package to MDOT for final review
03/15/2006	3870	Hold Omissions/Errors Check (OEC) Meeting
		Omissions/Errors Check (OEC) Meeting
03/31/2006		Consultant's Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)
05/01/2006		Final Deliverables to MDOT

Upon authorization of this contract, the Consultant shall immediately begin work to conduct the design survey, utility investigation, perform the geotechnical investigation, and prepare the base plans. The Consultant shall not proceed with the remainder of the design until authorized to do so in writing by the MDOT Project Manager.

VI. PAYMENT SCHEDULE

Compensation for this Scope of Design Services shall be on an actual cost plus fixed fee basis.

All invoices/bills for services must be directed to the Department and follow the “then current” guidelines. The latest copy of the “Professional Engineering Service Reimbursement Guidelines for Bureau of Highways” is available on MDOT’s Bulletin Board System. This document contains instructions and forms that must be followed and used for invoicing/billing; payment may be delayed or decreased if the instructions are not followed.

Payment to the Vendor for Services rendered shall not exceed the “Cost Plus Fixed Fee Not to Exceed Maximum Amount” unless an increase is approved in accordance with the contract with the Vendor. All invoices/bills must be submitted within 14 calendar days of the last date of services being performed for that invoice.

Direct expenses will not be paid in excess of that allowed by the Department for its own employees. Supporting documentation must be submitted, with the invoice/bill, for all billable expenses on the Project. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the CE activities of this Project. Hours spent in administrative, clerical, or accounting roles for billing and support, are not considered allowable hours; there will be no reimbursement for these hours.

Reimbursement for overtime hours will be limited to time spent on this Project in excess of forty hours per week. Any variations to this rule should be included in the price proposal.

VII. MONTHLY PROGRESS REPORT

On the first of each month, the Consultant Project Manager shall submit a monthly project progress report to the **Rob Tervo**, Project Manager. The monthly progress report shall follow the guidelines in attachment A.

VIII. FORMAT

Full size plans (cut size 24" x 36") and half size (cut size 11" x 17") consisting of plan sheets and profile sheets will be required. The project will require a ratio (scale) of 1" = 20'.

Other plan sheets that are required for this project shall be completed by the Consultant. These include, but are not limited to the following plan sheets:

- A. The title sheet. MDOT will provide a map of the area on a disk in our workstation format. If the map is not available, MDOT will provide a map that could be used. The Consultant shall be responsible for any revisions to the title sheet and the title sheet and map shall meet MDOT format and layout guidelines.
- B. Note Sheet.
- C. Typical Cross-Sections.
- D. Project specific Special Details.
- E. Construction staging and traffic control plans.
- F. Detail grade sheets for major intersections, ramp gores and critical areas.
- G. Paving details.
- H. Pavement marking plan(s).
- I. Culvert detail sheet(s).
- J. Vicinity and drainage map sheet.
- K. Alignment sheet.
- L. Witness and benchmark sheet(s).
- M. Soil boring log sheet(s).

All plans, special provisions, estimates, and other project related items shall meet all MDOT requirements and detailing practices (i.e., format, materials, symbols, patterns, and layout) or as otherwise directed by the Project Manager.

All plans, specifications, and other project related items are subject to review and approval by MDOT.

IX. UTILITIES

The Consultant shall be responsible for obtaining and showing on the plans the location and names of all existing utilities within the limits of the project. In the course of resolving utility conflicts, the Consultant shall make modifications to the plans or design details and provide assistance as directed by the MDOT Utility Permits Engineer and/or Project Manager. The

Consultant shall attend any utility meetings called to ensure that the concerns are addressed on the plans involving utilities. The Consultant shall assist in the review of utility permit requests to ensure compatibility with the project.

X. TRAFFIC CONTROL AND MDOT PERMITS

The Consultant shall be responsible for all traffic control required to perform the tasks as outlined in this Project Scope of Design Services.

The Consultant shall be responsible for obtaining up to date access permits and pertinent information for tasks in MDOT Right of Way (ROW). This information can be obtained through Jeff Rautiola, Permit Technician at the Ishpeming Transportation Service Center.

XI. PRE-QUALIFICATION AND SUBCONTRACTING OF CONTRACT WORK

Any task(s) for which the Consultant is not pre-qualified must be completed by a Subcontractor that is pre-qualified for that task(s). Any questions regarding prequalification should be directed to Phil Brooks, Prequalification Manager, at (517)335-2514.

The Department's prequalification is not a guarantee or warranty of the subcontractor's ability to perform or complete the work subcontracted. The Consultant remains fully responsible to the Department for completion of the work according to the authorization as if no portion of it had been subcontracted.

All subcontractor communications with the Department shall be through the Consultant to the MDOT Project Manager. This requirement may be waived if a written communication plan is approved by the MDOT Project Manager.

The Department may direct the immediate removal of any subcontractor working in violation of this subsection. Any costs or damages incurred are assumed by the Consultant by acceptance of the authorization. It is further understood that the Consultant's responsibilities in the performance of the contract, in case of an approved subcontract, are the same as if the Consultant had handled the work with the Consultant's own organization.

XII. CONSULTANT RESPONSIBILITIES (GENERAL)

For all P/PMS Tasks, please refer to **Combined Manual** which is listed on the MDOT Bulletin Board System and can be found under the **PPMS** Library. An index of the latest version of the task descriptions along with any revisions is in Attachment "F".

- A. Meet with the MDOT Project Manager to review project, location of data sources and contact persons, and review relevant MDOT operations. The Consultant shall review and clarify project issues, data needs and availability, and the sequence of events and team meetings that are essential to complete the design by the project plan completion date. Attention shall be given to critical target dates that may require a large lead time, such as geotechnical requirements, ROW submittal dates, Railroad coordination requirements, utility conflict resolution, local agency meetings, etc.
- B. Maintain a Design Project Record which includes a history of significant events (changes, comments, etc.) which influenced the development of the plans, dates of submittals and receipt of information.
- C. **P/PMS TASK 3330 - CONDUCT DESIGN SURVEY**
Perform surveys as necessary to design this project (see Attachment A). The Consultant's survey shall be as complete and accurate as necessary to:
 - 1. Calculate and verify plan quantities.
 - 2. Locate and lay out the future construction of this project.
 - 3. Perpetuate affected property controlling corners for monument preservation.

As part of the design proposal, the Consultant shall present a detailed survey work plan for review, evaluation and acceptance by the MDOT Project Manager.

- D. **P/PMS TASK 3360 - PREPARE BASE PLANS**

See Combined Manual under Attachment F for details.
- E. **P/PMS TASK 3361 - SUBMITTAL OF PRELIMINARY RIGHT-OF-WAY PLANS**

See Combined Manual under Attachment F for details.
- F. **P/PMS TASK 3380 - REVIEW BASE PLANS**

See Combined Manual under Attachment F for details.
- G. **P/PMS TASK 3390 - DEVELOP THE CONSTRUCTION ZONE TRAFFIC CONTROL CONCEPTS**
See Combined Manual under Attachment F for details.
- H. Perform storm sewer design calculations, including appropriate outlets and energy dissipation if necessary, as outlined in the MDOT Drainage Manual. Detention may be required. Detention pond design must meet, but is not limited to, local agency storm water regulations and Michigan Department of Environmental Quality water quality permit requirements. Submit all design calculations, drainage maps, and proposed profiles to the MDOT Project Manager for review prior to the Plan Review. Coordinate

storm sewer plans with the City of Marquette. Provide calculations as necessary to determine and verify equitable storm sewer cost sharing with the City of Marquette.

- I. The consultant shall identify the locations of any water main and/or sanitary sewer on the project.

The City of Marquette intends to upgrade the water and sewer system as part of this project. The City of Marquette will provide the design for the water and sewer on this project. The Consultant shall incorporate the water and sewer design into the plans for this project and ensure no conflicts with other work. The CONSULTANT shall submit a report to Steven J. Urda, Design Engineer - Municipal Utilities, Design Division for review and concurrence. A copy of the report shall be sent to the Project Manager.

- J. **P/PMS TASK 3510 - PERFORM ROADWAY GEOTECHNICAL INVESTIGATION**

Perform the needed soils surveys, soils boring and geotechnical investigation that will be needed to develop the construction plans and quantities. Also perform the analysis of this data. See Combined Manual under Attachment F for details.

MAINTAINING TRAFFIC DETAILS:

This includes providing a Lighted Arrow Panel, appropriate Warning Signs and Flaggers when needed. All work must be completed on weekdays between the hours of 9:00 a.m. and 3:30 p.m. No more than one lane will be closed at any time.

CORING FREQUENCY:

No less than 1 core every **500 feet** staggered between the northbound and southbound lanes of the **US-41 Business Route**. Cores shall also be taken at each side street approach. Total - approximately 25 cores.

BORING FREQUENCY AND DEPTH:

Soil borings shall be taken at every core location. All borings shall be drilled to a depth of 5 feet. To minimize utility concerns, the use of a hand auger is recommended.

Where granular soils are encountered, samples should be obtained and tested to determine whether the soil meets requirements for granular material class II or III per the 2003 Standard Specifications for Construction. Samples should be taken at every other mainline core location. Results should be summarized on the core/boring log with the description of the soil layer tested.

- K. **P/PMS Task 3522 – CONDUCT DRAINAGE STUDY, STORM SEWER DESIGN AND STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S)**

See Combined Manual under Attachment F for details.

L. P/PMS TASK 3540 - DEVELOP CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

See Combined Manual under Attachment F for details.

M. P/PMS TASK 3551 - DEVELOP/REVIEW PRELIMINARY TRAFFIC SIGNALS PLAN

See Combined Manual under Attachment F for details.

N. P/PMS TASK 3552 - DEVELOP PRELIMINARY PERMANENT PAVEMENT MARKING PLAN

See Combined Manual under Attachment F for details.

O. P/PMS TASK 3553 - DEVELOP PRELIMINARY NON - FREEWAY SIGNING PLAN

See Combined Manual under Attachment F for details.

P. P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS

See Combined Manual under Attachment F for details.

Q. P/PMS TASK 3581 - FINAL RIGHT-OF-WAY PLANS

See Combined Manual under Attachment F for details.

R. P/PMS TASK 3590 - REVIEW PRELIMINARY PLANS (THE PLAN REVIEW)

See Combined Manual under Attachment F for details.

S. P/PMS TASK 3670 - DEVELOP MUNICIPAL UTILITY PLANS

See Combined Manual under Attachment F for details.

T. P/PMS TASK 3675 - DEVELOP ELECTRICAL PLANS

See Combined Manual under Attachment F for details.

U. P/PMS TASK 3821 - COMPLETE/REVIEW TRAFFIC SIGNAL PLANS

See Combined Manual under Attachment F for details.

V. P/PMS TASK 3822 - COMPLETE PERMANENT PAVEMENT MARKING PLAN

See Combined Manual under Attachment F for details.

W. P/PMS TASK 3823 - COMPLETE NON-FREEWAY SIGNING PLAN

See Combined Manual under Attachment F for details.

X. P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

See Combined Manual under Attachment F for details.

Y. P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS

See Combined Manual under Attachment F for details.

Z. P/PMS TASK 3870 - HOLD OMISSIONS/ERRORS CHECK (OEC) MEETING

See Combined Manual under Attachment F for details.

The interval for plotting cross-sections and developing the grade book shall be 50 feet.
The intervals for critical areas shall be 25 feet.

AA. P/PMS TASK 5010 - CONSTRUCTION PHASE ENGINEERING AND ASSISTANCE

The Consultant may be required to provide Design Services during the construction phase of this project. If Construction Assistance is required, then a separate authorization for those services will be issued.

BB. If excavation is required, submit the excavation locations which may contain contamination. Project Manager then can proceed in requesting a Preliminary Project Assessment (PPA).

CC. The Consultant shall be required to prepare and submit a CPM network for the construction of this project. See Attachment B for details

DD. The Consultant representative shall record and submit type-written minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees.

EE. The Consultant shall provide the preliminary and final plan packages to the MDOT Project Manager four weeks prior to the Plan Review Meeting and three weeks prior to the OEC Meeting. The Project Manager will review the package for completeness and return to the Consultant along with a meeting distribution list. The Consultant shall make all necessary copies and distribute the plans for the plan review and the OEC meeting.

Approximately 30 sets will be required for each meeting. Plans for distribution will be 11" x 17". Two full size sets of plans will be required to be submitted to the MDOT Project Manager for each meeting. The Consultant shall also provide 12 sets of 11" x 17" plans and 2 full size sets of plans for the base plan review meeting.

- FF. Attend information meetings (i.e., public hearings, open houses, etc.) with the public and public officials to assist in responding to concerns and questions. May require the preparation of displays such as maps, marked-up plans, etc.
- GG. Prepare and submit any information, calculations, hydraulic studies, or drawings required by MDOT for acquiring any permit (i.e. NPDES, DEQ, etc), approvals (ie. county drain commission) and related mitigation. MDOT will submit permit requests.
- HH. Attend any project-related meetings as directed by the MDOT Project Manager.
- II. The Consultant shall assist in the review of driveway and utility permit requests, incorporate the information in the design plans and respond within 2 weeks from receipt of the permit.
- JJ. The MDOT Project Manager shall be the official MDOT contact person for the Consultant **and shall be made aware of all communications regarding this project.** The Consultant must either address or send a copy of all correspondence to the MDOT Project Manager. This includes all Subcontractor correspondence and verbal contact records.
- KK. The Consultant shall contact the MDOT Project Manager whenever discoveries or design alternatives have the potential to require changes in the scope, limits, quantities, costs, or right-of-way of the project.

XIII. MDOT RESPONSIBILITIES (GENERAL)

- A. Schedule and/or conduct the following:
 - 1. Project related meetings.
 - 2. The Plan Review
 - 3. Utility Meetings.
 - 4. Quantity summary sheets and final item cost estimates.
 - 5. Packaging of plans and proposal.
- B. Furnish Special Details and pertinent reference materials.

- C. Furnish prints of an example of a similar project and old plans of the area, if available.
- D. Supply existing plans for the Consultant to reproduce as available.
- E. Coordinate any necessary utility relocations.
- F. Provide the pavement design.
- G. Provide Survey Control and Monument Preservation Report.

ATTACHMENT A
CS 52044 – JN 60515C
US-41 BR (Washington Street), City of Marquette
Rublien to Fifth Street

SURVEY SCOPE OF WORK

NOTES: The consultant surveyor shall discuss the scope of this survey with the consultant design engineer before initiating any work on this project. A detailed Survey Work Plan with an estimate of hours by task **must** be included in the project proposal.

It is the responsibility of the Professional Surveyor to safeguard all corners of the United States Public Land Survey System, published Geodetic Control and any other Property Controlling corners that may be in danger of being destroyed by the proposed construction project.

I. SCOPE OF CONSULTANT DUTIES

Complete the survey for the project, but not limited to the following

- A. Provide horizontal and vertical control for mapping and construction purposes.
- B. Complete design base mapping for the project area.
- C. Identify, locate and map utilities for the project area, with manhole inventories.

II. CONSULTANT RESPONSIBILITIES

B. GENERAL REQUIREMENTS:

- 1. The Consultant shall use CAICE Software in preparing this survey. The Consultant shall prepare the CAICE survey project in accordance with Appendix F of the *MDOT Design Survey Manual*.
- 2. Surveys must comply with all Michigan laws relative to land surveying.
- 3. Surveys must be done under the direct supervision of a Professional Surveyor licensed to practice in the State of Michigan.
- 4. Work in any of the following categories of survey: Road Design, Bridge

Hydraulic, Right-of-Way, Ground Control (Photogrammetric), and/or Geodetic Control, must be completed by a survey firm which is pre-qualified by MDOT.

5. Surveys must meet all requirements of the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998. Please contact the Superior Region Survey Manager to clarify any specific questions regarding these standards.
6. Consultants must obtain all necessary permits, including an up-to-date permit from the MDOT Utilities Coordination and Permits Section, required to perform this survey on any public and/or private property.
7. The consultant must adhere to all applicable OSHA and MIOSHA safety standards, including the appropriate traffic signs for the activities and conditions for this job.
8. Consultants are responsible for a comprehensive and conscientious research of all records, including MDOT records, essential for the completion of this project.
9. Measurements, stationing, recorded data, and computations must be in international foot units, unless specified otherwise by the Project Manager.
10. MDOT will supply the horizontal coordinate control base for the project. Coordinate values shall be based upon the Michigan Coordinate System of 1983 (MCS 83), North Zone. The consultant shall establish additional intermediate horizontal control points, as needed, to the control base. Horizontal coordinate control supplied by MDOT shall be held fixed, and additional intermediate control established in this survey shall be adjusted to fit the supplied MDOT coordinate base. All final project data, right-of-way work and coordinates should be adjusted to the project coordinates as defined and established by MDOT Superior Region Surveys. All intermediate control established in this survey, shall be established in compliance with the Michigan Department of Transportation (MDOT) Design Surveys Standards of Practice, dated April 1, 1998.
11. MDOT will supply the primary vertical control benchmarks for the project. All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88). Vertical control marks, as provided by MDOT, shall be used as primary vertical control in this project. Intermediate vertical control for this project shall be established by three wire, or digital differential leveling between two primary vertical control marks. All leveling work shall comply with the Michigan Department of Transportation (MDOT) Design

Surveys Standards of Practice, dated April 1, 1998, and this scope of work.

12. Upon beginning this project, and every 90 days thereafter while working on this project, the consultant shall calibrate any Electronic Distance Measuring instrument (EDM) used in the work for this project on a National Geodetic Survey (NGS) Calibration Base Line (CBL), and provide a copy of the test result output from the NGS "Calibrat" software, along with a copy of the specification for the EDM. Should the instrument require adjustment, adjustments shall be made, and the calibration procedures will be repeated after such adjustments have been made. Only the output for the final calibration procedures, showing the instrument to be in calibration needs to be submitted.
13. The survey notes must be submitted to the Superior Region Survey Manager in 10" by 12' divided portfolios with flap covers. As many portfolios should be used as needed to contain all of the required documents and diskettes.
14. Each portfolio must be labeled on the outside per the following example:

Survey Notes for:

Route, Location and Project Limits [US-41; From the Bridge over the WCRR, R01 of 55011, to 100 feet North of 20th Avenue in Menominee] Control Section [55011] Job Number [80017C] Date [*of submittal*]

By [*Name of Firm*]

Michigan Professional Surveyor [] License# []

15. Each submittal is to be divided into three sections. These sections are to be labeled as follows: Administrative, Control, and Mapping.
 - a. The administrative section will include a completed copy of the LMDOT Form 222 (3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL," (Contents of the "ADMINISTRATIVE SECTION," shall be listed at the beginning of the "REMARKS" section of Form 222), the project's Professional Surveyors' Report on company letterhead, and any documentation with respect to any project specific meetings and/or conversations with MDOT Survey personnel.
 - b. The Control Section contains the data collected, and copies of all research documents used, to establish the horizontal and vertical reference systems for the project. It also includes a thorough written synopsis describing how the control systems were established.

Documentation of the calibration of instruments used in the survey should be included in this section. This section should also contain a complete list of control coordinates, control traverse raw data, least squares analysis for both control traverse points and benchmarks, a separate listing of control point coordinates and witnesses for mapping and construction staking of the project. A complete Benchmark list with datum, station and offset, elevation, and description of each benchmark shall also be included. This information must be submitted in hard copy, on 8 1/2" by 11" sheets, and ASCII electronic file format on CDs. Also, a sketch, on 24" by 36" sheets, of the control traverse, showing any ties (government corners, property, alignment, etc.) shall be included in this section.

- c. The Mapping section contains all relevant mapping information to produce the mapping used in the preparation of base plans for this project, mapping for drainage determinations, utility investigation information, and mapping for determining the need for acquiring grading permits, drive permits, and designing the approach road grading. The synopsis of the mapping work performed should be included in this section. A plot of the field verified base plan map, and final base plan map are included in this section.
16. A portfolio may contain several types of data but, no section is to contain more than a single type (i.e., Bridge Surveys separate from Road Surveys and Hydraulic Surveys). All sheets in a portfolio must be marked with the control section, job number, portfolio section name and page number. CDs must be labeled with the control section, job number, data type and file names. All lists shall be on 8 1/2" by 11" sheets.
 17. The Consultant representative shall record and submit typewritten minutes for all project related meetings to the MDOT Project Manager within two weeks of the meeting. The Consultant shall also distribute the minutes to all meeting attendees.
 18. The MDOT Project Manager is the official contact for the Consultant. The Consultant must either address, or send a copy of all correspondence to the MDOT Project Manager. The MDOT Project Manager shall be made aware of all communications regarding this project. Any survey related questions, in regard to this project, should be directed to the MDOT Superior Region Survey Manager.

At the completion of this survey and prior to beginning the design for this project, all original field survey notes, all electronic data, and all research records obtained for this project will be considered the property of MDOT and must be sent to the MDOT Superior Region Office Region Survey

Manager, 1818 3rd Ave. N., Escanaba, MI 49829-2720. Please use MDOT's Form 222 (3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL" for all transmittals. A copy of this transmittal form must also be sent to the Project Manager.

C. FIELD SURVEY

The purpose of the field survey is to obtain all information and data required by the project design engineer, to leave control in the field for future construction staking, and to provide a sufficient history of the area to enable the MDOT Survey Unit, and other surveyors to perform dependable surveys in the future.

E. CONTROL

1. HORIZONTAL

- a. The primary horizontal coordinate system will be established and defined for this project by MDOT. Horizontal coordinate values shall be a ground measure system based upon, and related to the Michigan Coordinate System of 1983 (MCS 83, (NAD83, CORS96, GEOID03)), North Zone (Zone 2111), by a project combined scale factor, and coordinate shift. All final project data, right-of-way work and coordinates shall be adjusted to the project coordinate control system as established by MDOT. Coordinate values must be in international foot units.
- b. Any traverse work must be closed and adjusted between two or more known points on the project control system. Open traverses are NOT acceptable. Unadjusted traverse measurements must produce an error of closure of not greater than 1:20,000. Any permissible error of closure shall be distributed throughout the traverse by means of a suitable least squares adjustment software program.
- c. Control traverse points must not be set greater than 1500 feet nor less than 300 feet apart, semi-permanent in nature, and located outside the proposed construction area to insure their availability for all phases of construction. Exceptions may be made for traverse lengths if approved by the MDOT Superior Region Survey Manager. All traverse points and the alignments must be tied to the control established for this project. Existing property controlling corners may be utilized as traverse points.

- d. All property controlling corners and public land survey system corners, and interior subdivision block corners within the project limits, shall be tied to the coordinate system for the project, and witnessed. This includes 1/16 corners and subdivision corners. Lot corners do not require witnesses unless they are utilized as horizontal control points.
- e. The horizontal project control for this project will be classified as intermediate project control according to the MDOT Standards of Practice dated April 1, 1998. Each control point must be accurately described and witnessed to at least four nearby features by the consultant. Please refer to MDOT's Standards of Practice for the minimum requirements for these points.
- f. A list of all traverse control points on project coordinates, and state plane coordinates, must be developed which includes datum, point designations, point and location descriptions, horizontal coordinates, station and offset, and witnesses.
- g. A list of all horizontal control points, traverse control points, alignment points, property corners and Right of Way points must be developed which includes datum, point designations, point descriptions, project coordinates, and state plane coordinates.
- h. All lists must be printed on 8.5" x 11" sheets and placed on CD. These lists must be in ASCII format.
- i. All field observations, unadjusted traverse computations, least squares adjustment output, and final adjusted coordinates for establishing the horizontal control must be included in the horizontal control section of the portfolio. All other data relating to the horizontal component of the control system must be included in the portfolio.

2. VERTICAL

- a. All elevations must be based upon the North American Vertical Datum of 1988 (NAVD88). Vertical control marks, as provided by MDOT, shall be used as primary vertical control in this project.

- b. Project benchmarks are intermediate vertical control. Intermediate vertical control for this project shall be established by three wire, or digital differential leveling between two primary vertical control marks. All leveling work shall comply with the Michigan Department of Transportation (MDOT) Design Surveys Standards of Practice, dated April 1, 1998, and the procedures and requirements in this scope of work.
- c. The following leveling practices must be used:
 - 1. All levels used shall be tested at the beginning of each project, and adjusted if necessary. In addition, any instrument dropped shall be tested before further use. Level testing shall be repeated after no more than 20 days of use if the project leveling takes more than 20 days.
 - 2. Leveling will begin and close on a primary bench mark.
 - 3. Leveling for intermediate control must attain a closure in feet, less than or equal to 0.3048 times 0.012 meters times the square root of the product of distance leveled in kilometers. (Closure in feet $\leq 0.3048 \text{ ft/m} \times 0.012 \text{ m} \times (K)^2$, where K = distance leveled in kilometers)
 - 4. All project bench marks shall be part of the level run between furnished bench marks.
 - 5. Any level run that does not close within required tolerance shall be resolved by either rerunning in the opposite direction or by leveling on to another furnished bench mark. If the loop closes when rerun in the opposite direction, then a run must be made to another known control bench mark to determine the true elevation.
 - 7. Turn points are to be “turtles,” or driven turn pins.
 - 8. All level shots shall be direct readings, a minimum of 1.5 feet above the bottom of the rod. The line of sight shall not be less than 1.5 feet above the ground at any point.
 - 9. Backsight and foresight distances from the level must be balanced within 10 percent of the distance. The level rods must be held vertical, using a rod bubble, when the reading is taken.

10. Maximum length of sights must not exceed 200 feet and no sight shall be less than 30 feet.
11. All readings will be made or interpolated to the nearest 0.001 foot. A rejection limit of 0.006 foot will be maintained between wire readings or electronic observations.
12. New project bench marks shall be set at approximate intervals of 1500 feet.
13. All control points leveled to shall be a turning point and part of the level circuit - side shots are not acceptable.
14. The leveling shall be analyzed and adjusted using a least squares adjustment program.

3. GENERAL CONTROL

- a. All horizontal and vertical control points shall be tied to the coordinate system for this project. Locations for all control points shall be located in relation to the record plan alignment by station and offset.
- b. The methods used to establish the horizontal and vertical components of the project coordinate control system must be fully discussed in the Surveyor's Project Report.
- c. The Consultant must include a sketch or CADD drawing of the project control in the portfolio, showing the alignment, stationing, project coordinates, state plane coordinates, and elevations.

H. MAPPING

1. The consultant must locate all utilities in the project area. All utility structures shall be tied to the coordinate system for this project. Locations for all utility structures shall be located in relation to the record plan alignment by station and offset.
2. Utility structure inventories shall be performed for all storm sewer manholes,

sanitary manholes, catch basins, inlets, water gate wells, and utility vaults. Each structure shall have a separate structure inventory sheet completed on an 8 1/2" by 11" sheet, which shall uniquely identify the structure, provide the structure location by station and offset to the re-established record plan alignment, provide the diameter, or dimensions and construction of the structure, provide the casting rim elevation, invert elevations, sizes and directions (with connecting structures) of all pipes in and out of the structure, structure bench and flowline elevations, with any sketches to assist in clearly portraying the data for the structure.

3. The Consultant must submit a list of project coordinates and physical descriptions for all utility structures with relation to the record plan alignment by station and offset.
4. All lists must be printed on 8.5" x 11" sheets and placed on CD. These lists must be in ASCII format.
5. The Consultant must include a plot of the field verified base plan map, and final base map in the Mapping section of the portfolio.

J. FINAL REPORT: DELIVERABLES

The consultant must organize and label the various sections of the portfolios as required by in this "Survey Scope of Work." All deliverables are to be included in the final report, unless it is satisfactorily explained in the synopsis why they are not necessary.

It is the responsibility of the consultant to insure that all electronic files submitted to MDOT conform to the required formats in the Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998, and all documents are legible.

The final report for this project shall include the following:

1. The first pocket of the first portfolio shall be the "Administrative" section and shall contain:
 - a. MDOT's Form 222(3/99) entitled "SURVEY NOTES: RECEIPT AND TRANSMITTAL,"(Contents of the first pocket, "ADMINISTRATIVE SECTION," shall be listed at the beginning of the "REMARKS" section on form 222).
 - b. A table of contents, which shall index all contents of the portfolios by

section and page number.

- c. The project's Professional Surveyor's Report on company letterhead, written and signed by the project's Professional Surveyor, consisting of the following:
 - i. The limits of the survey and original survey scope as determined by the consultant Surveyor and Design Engineer.
 - ii. A comprehensive report, including a complete synopsis of the survey work performed on this project.
 - iii. The sources, datums and the methods used to establish the project horizontal coordinates, elevations, and the alignment(s) for this project.
 - iv. A detailed synopsis of how the horizontal and vertical control for this project was determined.
 - v. A detailed synopsis of how the record plan centerline alignment was re-established, including a synopsis of the alignment research and record plan sets or notes used.
 - vi. A detailed synopsis of public land survey system corner work, property controlling corner work, property, right of way, and easement concerns within the project limits. A complete discussion of government corners recovered, perpetuated or otherwise used as part of the survey shall be included.
 - vii. A detailed explanation of anything discovered during the survey of this project that may create a problem for the designer or another surveyor.
 - viii. A statement of certification from the consultant surveyor supervising the project as to compliance with Michigan Department of Transportation (MDOT) Design Surveys *Standards of Practice* dated April 1, 1998.
- d. Any documentation with respect to any project specific meetings and /or conversations with MDOT personnel.

- 2. The "Control" Section of the portfolio(s) shall include:

- a. A copy of the synopsis of how the horizontal and vertical control for this project was determined.
 - b. Copies of all instrument calibration documentation.
 - c. Documentation of horizontal and vertical datum sources, including copies of all datum source documents.
 - d. Individual coordinate, and witness lists for the horizontal control points, traverse control points, and bench marks. These lists shall identify and describe the type of monumentation, provide the location of the monuments by station and offset, and list the standard deviation of each monumented point. All lists shall be on 8½" by 11" sheets.
 - e. Least squares analysis for horizontal and vertical control.
 - f. Control sketch with control points, government corners and alignment plotted, maximum size 24" by 36" sheets.
 - g. A complete Benchmark list with datum, station and offset, elevation, and description of each benchmark.
 - h. All original field survey notes, all electronic survey data files, all calculation sketches, and all research records obtained for the horizontal and vertical control for this project. All electronic survey data files for control shall be submitted on CD's, specifically labeled. Paper copies of all electronic survey data files, for control data, are required on 8½" by 11" sheets.
3. The "Mapping" section of the portfolio(s) shall contain:
- a. A detailed synopsis of the mapping work performed for the preparation of base plans, and project design.
 - b. A plot of the field verified base plan map.
 - c. A final base plan map.
 - d. A list of project coordinates and physical descriptions for all utility structures with relation to the record plan alignment by station and offset.
 - e. Copies of all utility structure inventory sheets for all storm sewer manholes, sanitary manholes, catch basins, inlets, water gate wells, and utility vaults. Each structure shall have a separate structure inventory sheet completed on an 8 ½" by 11" sheet.

- f. All original field survey notes, all electronic survey data files, all calculation sketches, and all research records obtained for this project. All electronic survey mapping data files shall be submitted on CD only, specifically labeled. Paper copies of all survey data files, other than mapping data, are required on 8½" by 11" sheets.

ATTACHMENT B
CS 52044 – JN 60515C
US-41 (WASHINGTON STREET), CITY OF MARQUETTE
CONSTRUCTION CRITICAL PATH NETWORKS

I. INTRODUCTION

The Consultant is required to submit a Construction Critical Path Network at various points in the design process. Refer to the following:

P/PMS TASK 3580 - DEVELOP PRELIMINARY PLANS

P/PMS TASK 3830 - COMPLETE THE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN

P/PMS TASK 3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS

Construction Critical Path Networks are often needed to develop the progress schedule for a project. They are required on any project designated to include an Incentive/Disincentive or Special Liquidated Damages clause. Construction Critical Path Networks are also recommended for projects with the following characteristics:

1. New construction.
2. Major reconstruction or rehabilitation on an existing roadway that will severely disrupt traffic.
3. Unique or experimental work.
4. More than one construction season.
5. Complex staging (multiple stages with traffic shifts).

As noted in MDOT's Construction and Technology Instructional Memorandum 1997-7, Progress Schedule Determinations/Critical Path Rates,

A preparation of a Critical Path is a requirement on all consultant-designed projects, regardless of the project type or complexity.@

The MDOT Resident Engineer assigned to the project should be consulted when developing Construction Critical Path Networks.

MDOT requires the precedence diagramming method. The Consultant will submit this network in MPX version 4.0.

II. NETWORK DEVELOPMENT

The network will be defined using the following steps.

1. Activity definition.
2. Activity sequencing.
3. Duration estimation.
4. Schedule development.

1. ACTIVITY DEFINITION

The Consultant will define the specific activities in enough detail so that the proper objectives will be met. The Consultant must identify assumptions (those factors considered true, real or certain). Supporting detail for the activities should be documented and organized as needed to simplify the review of the activities by MDOT personnel.

The Construction Critical Path Network must start with the ALetting Date@ as the first activity and terminate with the AEnd of Project@ as the finish activity.

A sufficient number of activities will be required with sufficient detail so that the controlling construction operation(s) may be identified. Notation on each activity shall include a brief work description and activity time duration.

2. ACTIVITY SEQUENCING

Activity sequencing involves identifying and documenting interactivity dependencies. The Consultant must sequence activities accurately to support later development of a realistic and achievable construction schedule. Two types of dependencies should be considered. Mandatory dependencies are inherent in the nature of the work being done, such as construction sequencing. Discretionary dependencies are based on a knowledge of the work to be done. Constraints are used to show how the activities relate to each. The Consultant must include documentation supporting all discretionary dependencies used in the project. All activities must lead to another activity. Only Start to Start, Finish to Finish and Finish to Start relationships will be allowed. All logic shall show how the given activity is dependent on its preceding activities.

3. DURATION ESTIMATION

After the Consultant has sequenced the activities, the Consultant should determine the activity duration. Activity duration estimating involves assessing the number of work periods likely to be needed to accomplish each activity. Duration (working days): No activity will have a duration greater than 20 working days unless approved by the Engineer. Activities that will be allowed to exceed 20 working days include, but are not limited to, working drawing approvals or other activities not under the control of the

Contractor. If requested by the Engineer, the Consultant shall explain the reasonableness of activity time durations. The approved MDOT production rates will be used in estimating activity duration. These are available in the Supplemental Information section of this attachment. The Consultant must document and submit all assumptions made during the duration estimation to MDOT.

4. SCHEDULE DEVELOPMENT

The activity sequencing, duration estimations and the calendars are combined to create the construction schedule. During the development of the schedule the Consultant will verify:

1. The required schedule to build the project.
2. The constructability of the project.
3. If the maintaining traffic scheme will work.
4. If seasonal limitations will affect the construction.
5. Any other project specific considerations.

The MDOT Calendars will be used by the Consultant in developing the network. The calendars are based on a 4, 5 or 6 day work week. The MDOT Calendars are included in the Supplemental Information section of this attachment.

At this point there should be no negative float in the network. If there is, there is an error in the network and the error must be corrected before network submittal.

All summary tasks shall be removed prior to submittal to MDOT Project Manager

III. DELIVERABLES

After this final step the design consultant will submit the finished CPM schedule to MDOT

1. Documents

- A. 11" x 17" plot of the network. The critical path shall be clearly identified on the plot. A larger plot may be required for complex networks.
- B. Work Day / Completion Date Determination Worksheet.
- C. List of any other assumptions or controlling factors used in creating the network. For example, permit or maintaining traffic restrictions.

2. Electronic Format

This section sets the requirements for the electronic submittal of the Consultant=s Construction Network. All networks shall be submitted on a 3.5 inch floppy disk (or via E-mail) using one of the following formats:

- A. **Standard Electronic Media Format:** This is a standard ASCII text file containing the data elements below, in the order specified. This file can be created using any text editor or word processing application (i.e., MS-Word, WordPerfect, Notepad, Write) but must be saved as an ASCII file.

The **first line** will provide a descriptive header describing the submittal and containing:

Control Section
Job Number
Route
Consultant name
Date of Submittal

The next line will be **blank**, followed by multiple data lines.

Each **data line** will contain one record pertaining to one task of the job. Separate data fields by a comma. Fields within each task line are as follows:

(Note that the term "task" is synonymous with "activity." Leave fields that are not required blank)

- (1) Task # (Job # followed by a hyphen followed by this task's unique 4 digit task number. This is the Preceding Event Activity Code)
- (2) Description of Task, Milestone or Hammock, blank if this record is a constraint
- (3) Calendar (see attached list)
- (4) Duration of task, blank for constraints
- (5) Task # of the next task (Succeeding Event) - leave blank if this record is not a constraint or hammock
- (6) Type of constraint (FS, SS, FF) - leave blank if this record is not a constraint.
- (7) Delay, if required
- (8) Original "Baseline" Start Date
- (9) Original "Baseline" Finish Date
- (10) Current (forecast) Start Date (early start)
- (11) Current (forecast) Finish Date (early finish)
- (12) Estimated completion date (if different from early start + current duration)
- (13) Late Start Date
- (14) Late Finish Date
- (15) Actual Start Date
- (16) Actual Finish Date

Example - each line contains the following:

Task # (preceding event), Description, Calendar, Duration, Next Task # (succeeding event), Constraint Type, Delay, Baseline Start, Baseline Finish, Early Start, Early Finish, Estimated Completion Date, Late Start, Late Finish, Actual Start, Actual Finish, Total Float.

- B. **Primavera Project Planner(P3) 2.0 Export Procedure:** Users who have Primavera Project Planner(P3) version 2.0 can automatically create a export file by following the below export procedure below. **Users having an older version of Primavera may use the applications export feature only if they are able to include all the data elements listed in the version 2.0 format.**

1. Choose Tools, Project Utilities, **EXPORT**
2. Click **ADD**, Then click **OK** to accept the next sequential ID number, or type a unique number to identify the specifications and click **OK**
3. Enter a description for the specification in the Title field
4. **Specify data items to export**

Activities

- Select **Contents of List**

- Use the Description column to specify which data items to export
- To add items, click the right mouse button in the Description column and choose from the list. Suggested Items include: **Activity ID, Activity Description, Actual Start, Actual Finish, Calendar ID, Early Start, Early Finish, Late Start, Late Finish, Original Duration.**
- Select **All Current, All Target, or All Target2**
- Set Description Length to 48

OR

Constraints

- Select **Successor relationships** - Choose this option to export Activity IDs and their corresponding successors only. Lags and relationship types will also be displayed in this output file.

5. Click **FORMAT** in Export Dialog Box
6. In the Output file section, enter a new name and path (ex. A:\actexp or A:\conexp). Do not include a file extension.
7. In the type field, click the minimize button and choose the **[.PRN]** - **ASCII** file format for the output file.
8. Select **CALENDAR** for Date Format
9. Set ASCII Output Field Separation to **1** and Blank column width to **0**
10. Click **RUN**
11. In the Output Options dialog box, click on **OK**

NOTE: A COMPLETED FILE EXPORT WILL CONSIST OF 2 EXPORT FILES (ACTIVITIES & CONSTRAINTS)

- C. **Microsoft Project Export Procedure:** Users of Microsoft Project Version 4.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.
1. Choose File, Save As from the main menu
 2. In the Save File as Type box Select **MPX 4.0**
 3. On the drive box select a: or whichever drive is the 3.5" Floppy drive
 4. Click on **OK**
- This saves the file in MPX format.
- D. **Primavera Sure Track:** Users of Sure Track Version 2.0 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.
1. Choose File, Save As from the main menu
 2. In the filename box input a filename
 3. In the Save File as Type box Select **MPX**
 4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
 5. Click on **OK**
- This saves the file in MPX format
- E. **Scitor Project Scheduler 7 Export Procedure:** Users of Scitor Project Scheduler Version 7 and above can create a Microsoft Project Exchange (MPX) file by following the procedure below.
1. Choose File, Save As from the main menu
 2. In filename box select a filename
 3. In the Save File as Type box Select MPX
 4. On the drive box select a: or whichever drive is the 3.5" Floppy drive
 5. Click on **OK**
- This saves the file in MPX format
- F. **Export Files with Other Scheduling Applications:** Most scheduling packages have export functions similar to those described above. If the Consultant chooses to use packages with export capabilities, they shall include all items listed in the Standard Media Format in a text or ASCII type file.

IV. SUPPLEMENTAL INFORMATION

A. MDOT CRITICAL PATH-CONSTRUCTION TIME ESTIMATES

Drainage

Cross Culverts

Rural Highways	40 m/day
Expressways	50 m/day
Large Headwalls	5 days/unit
Slab or Box Culverts	5 days/pour
Plowed in Edge Drain(production type project)	4500 m/day
Open Graded Underdrain(production type project)	1200 m/day

Sewers

0m-5m(up to 1500mm)	40 m/day
0m-5m(over 1500mm)	25 m/day
5m-over(up to 1500mm)	25 m/day
5m-over(over 1500mm)	20 m/day
Jacked-in-place	13 m/day
including excavation pit & set up	min. 5 days

Tunnels

hand mining	8 m/day
machine mining	20 m/day
including excavation pit & set up	min. 5 days

Manholes

3 units/day

Catch Basin

4 units/day

Utilities

Water Main(up to 400mm)	100 m/day
Flushing, Testing & Chlorination	4 days
Water Main(500mm-1050mm)	25 m/day
Flushing, Testing & Chlorination	5 days
Order & Deliver 600 mm HP Water Main	50 days/order
Gas Lines	100 m/day

Earthwork and Grading

	Metro Exp	Rural
Embankment(CIP)	1500 m3/day	5300 m3/day
Excavation and/or Embankment(Freeway)	1500 m3/day	9200 m3/day
Excavation and/or Embankment(Reconstruction)	750 m3/day	3800 m3/day
Embankment(Lightweight Fill)	300 m3/day	600 m3/day
Muck(Excavated Waste & Backfill)		1500 m3/day
Excavation(Widening)		600 m/day
Grading(G & DS)		750m/day
Subbase and Selected Subbase(up to 7.4m)		600 m/day
Subbase and Selected Subbase(7.4 m & over)		450 m/day

Subgrade Undercut & Backfill	1500 m ³ /day
Subbase & Open-Graded Drainage Course	450 m/day
Surfacing	
Concrete Pavement(7.3m)	450 m/day
Including Forming & Curing	min. 7 days
Bituminous Pavement(7.3m)	1200 m/day/course
Concrete Ramps(4.9m)	300 m/day
Including Forming & Curing	min. 7 days
Curb(1 side)	750 m/day
Concrete Shoulder-Median	1200 m ² /day
Bituminous Shoulders(1 side per course)	750 m/day
Sidewalk	180 m ² /day
Sidewalk(Patching)	65 m ² /day
Structures	
Sheeting(Shallow)	30 m/day
General Excavation at Bridge Site	750 m ³ /day
Excavation for Substructure(Footings)	1 unit/day
Piles(12m)	15 piles/day
Substructure(Piers & Abutments)	5 days/unit
Order and Delivery of Beams	
Plate Girders	100-120 days/order
Rolled Beams	90-120 days/order
Concrete Beams	50 days/order
Erection of Structural Steel	3 days/span
Bridge Decks	
Form & Place Reinforcement(60m Structure)	15 days
Pour Deck Slab(1 1/5 days/pour)	2 days/span
Cure	14 days
2 Course Bridge Decks	
Add 9 days for Second Course Latex	
Add 12 days for Second Course Low Slump	
Sidewalks and Railings	
Sidewalks and Parapets	5 days/span
Slip Formed Barriers	2 days/span
Clean Up	10 days
Pedestrian Fencing	
Shop Plan Approval & Fabrication	1-2 months
Erection	1 week/bridge
Rip Rap Placement	
Bucket Dumped	385 m ³ /day

Bucket Dumped and Hand Finished	131-523 m ³ /day
Retaining Walls	1 Panel/day min. 10 days
Railroad Structures	
Grade Temporary Runaround	750 m ³ /day
Ballast, Ties & Track	50 m/day
Place Deck Plates	5 days/span
Waterproof, Shotcrete & Mastic	5 days/span
Railroad Crossing Reconstruction	10-15 work days (depends on if concrete base is involved)
Temporary Railroad Structures	
Order & Deliver Steel	55 days/order
Erect Steel	1 day/span
Ties and Track	3 days/span
Pumphouse	
Structure	30 days/m
Order & Deliver Electrical & Mechanical Equipment	90 days
Install Electrical & Mechanical Equipment	30 days
Miscellaneous	
Removing Old Pavement	60 m/day
Removing Old Pavement for Recycling(7.3m)	450 m/day
Crushing Old Concrete for 6A or OGDC	1350 mtons/day
Removing Trees(Urban)	15 units/day
Removing Trees(Rural)	30 units/day
Removing Concrete Pavement	450 m ² /day
Removing Sidewalk	250 m ² /day
Removing Curb & Gutter	450 m/day
Removing Bitumin.ous Surface	1600 m ² /day
Conditioning Aggregate	900 m/day
Bitumin.ous Base Stablizing	2500 m ² /day
Ditching	600 m/day
Trenching for Shoulders	750 m/day
Station Grading	610 m/day
Clearing	8000 m ² /day

Restoration(Topsoil, Seeding, Fertilizer & Mulch)	1650 m2/day
Sodding	2100 m2/day
Seeding	40000 m2/day
Guard Rail	230 m/day
Fence(Woven Wire)	360 m/day
Fence(Chain Link)	150 m/day
Clean Up	600 m/day
Concrete Median Barrier	300 m/day
Cure	min. 7 days
Reroute Traffic(Add 4 days if 1st item)	1 day/move
Concrete Glare Screen	450 m/day
Light Foundations	6 units/day
Order & Delivery	6-8 week/order
Remove Railing & Replace with Barrier(1 or 2 decks at a time)	4 days/side
Longitudinal Joint Repair	1600 m/day
Crack Sealing	4800 m/day
Joint and Crack Sealing	500 m/day
Repairing Pavement Joints - Detail 7 or 8	200 m/day
Seal Coat	6400 lane m/day
Diamond Grinding/Profile Texturing Concrete	3300 m2/day
Rest Area Building	
Order Material	3 months
Construct Building	9 months
Tower Lights	
Order and Deliver Towers	100 days
Weigh-In-Motion	
Order and Deliver Materials	1 month-6weeks
O & D with Installation	3 months
Raised Pavement Markers	300 each/day
Attenuators	2 each/day
Shoulder Corrugations, Ground or Cut	8 km-9.7 km/side/day
Aggregate Base	2900 m ² /day
Aggregate Shoulders	350 m ³ /day
Freeway Signing - 3# Post Type	50 signs/day
Concrete Joint Repair (High Production-Projects with > 1000 patches)	
Average(1.8m)	50 patches/day
Large(>1.8m)	500 m2/day
Bridge Painting	90 m2/day
Pin and Hanger Replacement	3 beams/day
Order Pin & Hanger	60 days

Bridge Repair

Scarifying(Including Clean up)	10000 m2/day
Joint Removal(Including Clean up)	4 m/day
Forming & Placement	3.5 m/day
Hydro-Demolishing	300 m/day
Barrier Removal	15 m/day
Placement	45 m/day
Hand Chipping (Other than Deck)	.24 m ³ /person/day
Shoulder Corrugations, Ground or Cut	8 km-9.7 km/side/day
Casting Latex Overlay	250 m/day
Curing Overlay	
Regular	4 days
High Early	1 day
Thrie Beam Retrofit	30 m/day
Beam End Repairs	
Welded Repairs	.75 days/repair
Bolted Repairs	.50 days/repair
Bolted Stiffeners (Pair)	.25 days/repair
Grind Beam Ends	.25 days/repair
Welded Stiffeners (Pair)	.25 days/repairH-
Pedestal Repairs:	
Welded Repair	.50 days/each
Replacement	1 day/each
Deck Removal	235 m ² /day

Surfacing-Bituminous

Metro-Primary(<18000mtons)	
Paving	540 mtons/day
Joints	150 m/day
Cold Milling	3400 m2/day
Aggregate Shoulders	900 mtons/day
Metro Primary(>18000mtons)	
Paving	540 mtons/day
Joints	200 m/day
Cold Milling	7500 m2/day
Metro Interstate(>18000mtons)	
Paving	1100 mtons/day
Joints	360 m/day
Aggregate Shoulders	900 mtons/day
Urban Primary(<18000mtons)	
Paving	640 mtons/day
Joints	100 m/day
Cold Milling	1700 m2/day

	Rubblizing	1700 m2/day
	Aggregate Shoulders	450 mtons/day
Urban Primary(>18000mtons)		
	Paving	1000 mtons/day
	Joints	120 m/day
	Cold Milling	1700 m2/day
	Aggregate Shoulders	500 mtons/day
Urban Interstate(>18000mtons)		
	Paving	1200 mtons/day
	Joints	220 m/day
	Cold Milling	1700 m2/day
	Rubblizing	5800 m2/day
	Aggregate Shoulders	640 mtons/day
Rural Primary(<18000mtons)		
	Paving	640 mtons/day
	Joints	120 m/day
	Cold Milling	590 mtons/day
	Crush & Shape	10000 m2/day
	Aggregate Shoulders	640 mtons/day
Rural Primary(>18000mtons)		
	Paving	1100 mtons/day
	Joints	150 m/day
	Cold Milling	800 mtons/day
	Crush & Shape	10000 m2/day
Rural Interstate(>18000mtons)		
	Paving	1280 mtons/day
	Joints	220 m/day

B. WORKSHEET

WORK DAY/COMPLETION DATE DETERMINATION

CS: _____

JN:

DESCRIPTION OF WORK: _____

MAJOR
WORK ITEM

PRODUCTION QUANTITY RATE

ESTIMATED
TIME

[illegible]

TOTAL ESTIMATED TIME:

COMPLETION DATE: _____ (Calendar Days or Work Days)

COMMENTS:

C. MDOT CALENDARS

The following are the MDOT 4, 5 and 6 day calendars:

CALENDAR	DESCRIPTION	START	FINISH
1	Std - Apr 16 - Nov 15 - 4 day	APR 16	NOV 15
2	LP - Bit Stab - 4 day	MAY 15	OCT 15
3	UP - Bit Stab - 4 day	JUN 01	OCT 01
4	LP S of M-46 - Bit Pave - 4 day	MAY 05	NOV 15
5	LP N of M-46 - Bit Pave - 4 day	MAY 15	NOV 01
6	UP - Bit Pave - 4 day	JUN 01	OCT 15
7	LP - Bit Seal Coat - 4 day	JUN 01	SEP 15
8	UP - Bit Seal Coat - 4 day	JUN 15	SEP 01
9	Tree Planting - Deciduous - 4 day	MAR 01 OCT 01	MAY 15 NOV 15
10	Tree Planting - Evergreen - 4 day	MAR 01	JUN 01
11	South LP - Restoration - 4 day	MAY 01	OCT 10
12	North LP - Restoration - 4 day	MAY 01	OCT 01
13	UP - Restoration - 4 day	MAY 01	SEP 20
14	Full Year - Winter Work - 4 day	JAN 01	DEC 31
21	Std - Apr 16 - Nov 15 - 5 day	APR 16	NOV 15
22	LP - Bit Stab - 5 day	MAY 15	OCT 15
23	UP - Bit Stab - 5 day	JUN 01	OCT 01
24	LP S of M-46 - Bit Pave - 5 day	MAY 05	NOV 15
25	LP N of M-46 - Bit Pave - 5 day	MAY 15	NOV 01
26	UP - Bit Pave - 5 day	JUN 01	OCT 15
27	LP - Bit Seal Coat - 5 day	JUN 01	SEP 15
28	UP - Bit Seal Coat - 5 day	JUN 15	SEP 01
29	Tree Planting - Deciduous - 5 day	MAR 01 OCT 01	MAY 01 NOV 15
30	Tree Planting - Evergreen - 5 day	MAR 01	JUN 01

31	South LP - Restoration - 5 day	MAY 01	OCT 10
32	North LP - Restoration - 5 day	MAY 01	OCT 01
33	UP - Restoration - 5 day	MAY 01	SEP 20
34	Full Year - Winter Work - 5 day	JAN 01	DEC 31
35	Full Year - Expedited - 6 day	JAN 01	DEC 31

ATTACHMENT C
CS 52044 - JN 60515C
US-41 BR (WASHINGTON STREET), CITY OF MARQUETTE

MONTHLY PROGRESS REPORTS

The first two pages of this attachment are the necessary layout of the Monthly progress reports and the last three pages are a completed example.

Control Section 00000
Job Number 00000C
Structure Number S00
Date 00/00/00

MONTHLY PROGRESS REPORT

- A. Work accomplished during the previous month.
- B. Anticipated work items for the upcoming month.
- C. Real or anticipated problems on the project.
- D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.
- E. Items needed from MDOT.
- F. Copy of Verbal Contact Records for the period (attached).

Structure Number - Control Section - Job Number
Route, Location Description
Design Schedule as of 00/00/95

**LIST TASKS, SUBMITTALS, APPROVALS AND MEETINGS AS OUTLINED IN
SCOPE OF DESIGN SERVICES AS NEEDED. THIS LIST IS JUST AN EXAMPLE.**

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or Actual Start Dates	(Anticipated) or Actual Finish Dates	Task	Task Description
00/00/00	00/00/00	00/00/00	00/00/00	??	Initial project meeting.
00/00/00	00/00/00	00/00/00	00/00/00	3330	Conduct Design Survey..
00/00/00	00/00/00	00/00/00	00/00/00	3360	Prepare Base Plans
00/00/00	00/00/00	00/00/00	00/00/00		Submit Base Plans
00/00/00	00/00/00	00/00/00	00/00/00	3580	Develop Preliminary Plans
00/00/00	00/00/00	00/00/00	00/00/00	3390	Develop Construction Zone Traffic Control Concepts
00/00/00	00/00/00	00/00/00	00/00/00	3540	Develop Construction Zone Traffic Control Plan
00/00/00	(00/00/00)	00/00/00	00/00/00	3550	Develop Preliminary Traffic Operations Plan.
00/00/00	(00/00/00)	00/00/00	00/00/00	3351	Review & Submit of Preliminary Right-Of-Way Plans.
00/00/00	(00/00/00)	00/00/00	00/00/00		Submittal of The Plan Review Package.
00/00/00	(00/00/00)	00/00/00	00/00/00		Completion of the Plan Review Meeting.
00/00/00	(00/00/00)	00/00/00	00/00/00	3840	Develop Final Plans and Specifications
00/00/00	(00/00/00)	00/00/00	00/00/00		Submittal of final plans/proposal package to MDOT for final review.
00/00/00	00/00/00	00/00/00	00/00/00	3870	Omissions/Errors Check (OEC) Meeting
00/00/00	00/00/00	00/00/00	00/00/00		Consultant=s Plan Completion: Final Construction Plan/Proposal package with recommendations incorporated to MDOT (two weeks after OEC Meeting)
00/00/00	00/00/00	00/00/00	00/00/00		Final Deliverables to MDOT

Control Section 12345
Job Number 11111C
Structure Number S02
Date 07/31/95

MONTHLY PROGRESS REPORT

- A. Work accomplished during the previous month.
 - 1. During the last month we completed the Final Right of Way plans and submitted them to Thomas Nelson, Jr. on 05/01/99.
- B. Anticipated work items for the upcoming month.
 - 1. Submit the Preliminary Plans and related material on 03/11/99.
 - 2. Attend the meeting regarding the Ameritech lines on the bridge, scheduled for 03/12/99.
- C. Real or anticipated problems on the project.
 - 1. We foresee no problems at this time.
- D. Update of previously approved detailed project schedule (attached), including explanations for any delays or changes.
 - 1. The design is falling behind schedule because we had problems resolving the geometries of the ramps in relation to the bridge. The Preliminary Plan submittal will be the only task affected by this delay because we will make up the lost time prior to submitting the Final Plans and Specifications.
- E. Items needed from MDOT.
 - 1. Prior to final Plan submittal we will need the latest Special provision and Supplemental Specification checklist.
- F. Copy of Verbal Contact Records for the period (attached).
 - 1. Discussed bridge and ramp geometries with Tom Myers of MDOT Traffic and Safety Division on 07-24-95.

SN: S02 - CS: 12345 - JN: 11111C
M-111, from There Village Limits to north of That Road
Design Schedule as of 07/31/95

Original Authorized Start Date	Original Authorized Finish Date	(Anticipated) or Actual Start Dates	(Anticipated) or Actual Finish Dates	Task	Task Description
01/12/95	01/12/95	01/12/95	01/12/95 ??		Initial project meeting.
01/29/95	01/29/95	01/30/95	01/30/95 3330		Conduct Design Survey.
02/17/95	04/10/95	02/17/95	04/20/95 3360		Prepare Base Plans.
02/29/95	02/29/95	02/29/95	02/29/95 3390		Develop the Construction Zone Traffic Control Concepts
03/12/95	03/13/95	03/12/95	(03/30/95)	3540	Develop Construction Zone Traffic Control Plan
03/20/95	03/19/95	03/25/95	(03/30/95)	3551	Develop/Review Preliminary Traffic Signal Plan
07/01/95	07/01/95	(07/01/95)	(07/01/95)	3590	The Plan Review Meeting
07/11/95	08/11/95	(07/11/95)	(08/11/95)	3821	Complete/Review Traffic Signal Plan
09/15/95	09/15/95	(09/15/95)	(09/15/95)	3830	Complete Construction Zone Traffic Control Plan.
09/16/95	09/16/95	(09/16/95)	(09/16/95)	3840	Develop Final Plans and Specifications
09/25/95	09/23/95	(09/25/95)	(09/25/95)	3870	Omissions/Errors Check (OEC) Meeting

VERBAL CONTACT RECORD

Control Section 12345

Job Number 11111C

Structure Number S02

Date 07/31/95

Joe Engineer talked to Tom Myers and decided to use a 0.05'/ft super on ramp A leading into the bridge.

P/PMS TASK - INDEX - VERSION 2 rev 2
ISSUED 9/29/2000

P/PMS TASK	CURRENT DATE	LATEST REVISION DATE
3120 - CONDUCT STRUCTURE DECK CONDITION SURVEY	07/29/99	
3330 - CONDUCT DESIGN SURVEY	07/29/99	
3340 - CONDUCT STRUCTURE SURVEY	07/29/99	
3350 - CONDUCT HYDRAULICS SURVEY	07/29/99	
3360 - PREPARE BASE PLANS	06/22/99	
3361 - REVIEW AND SUBMIT PRELIMINARY RIGHT OF WAY (PROW) PLANS	07/16/99	
3370 - PREPARE STRUCTURE STUDY	06/16/99	
3380 - REVIEW BASE PLANS	06/29/99	
3390 - DEVELOP THE CONSTRUCTION ZONE TRAFFIC CONTROL CONCEPTS	07/16/99	
3510 - PERFORM ROADWAY GEOTECHNICAL INVESTIGATION	07/29/99	
3520 - CONDUCT HYDROLOGIC, HYDRAULIC AND SCOUR ANALYSES	08/29/00	revised per P. Schriener
3530 - CONDUCT FOUNDATION STRUCTURE INVESTIGATION	07/16/99	
3540 - DEVELOP CONSTRUCTION ZONE TRAFFIC CONTROL PLAN	07/16/99	
3551 - DEVELOP/REVIEW PRELIMINARY TRAFFIC SIGNALS PLAN	07/16/99	added to index 1/5/2000
3552 - DEVELOP PRELIMINARY PERMANENT PAVEMENT MARKING PLAN	07/16/99	
3553 - DEVELOP PRELIMINARY NON - FREEWAY SIGNING PLAN	07/16/99	
3554 - DEVELOP PRELIMINARY FREEWAY SIGNING PLAN	07/16/99	
3570 - PREPARE PRELIMINARY STRUCTURE PLANS	07/16/99	
3580 - DEVELOP PRELIMINARY PLANS	06/30/99	
3581 - FINAL RIGHT-OF-WAY PLANS	07/16/99	
3590 - REVIEW PRELIMINARY PLANS	06/29/99	

P/PMS TASK	CURRENT DATE	LATEST REVISION DATE
3670 - DEVELOP MUNICIPAL UTILITY PLANS	06/30/99	
3675 - DEVELOP ELECTRICAL PLANS	07/01/99	
3710 - DEVELOP REQUIRED MITIGATION (FOR INFORMATION ONLY, THIS IS NOT A CONSULTANT TASK)	07/16/99	
3720 - SUBMIT ENVIRONMENTAL PERMIT APPLICATIONS (FOR INFORMATION ONLY, THIS IS NOT A CONSULTANT TASK)	07/16/99	
3821 - COMPLETE/REVIEW TRAFFIC SIGNAL PLANS	07/16/99	
3822 - COMPLETE PERMANENT PAVEMENT MARKING PLAN	07/16/99	
3823 - COMPLETE NON-FREEWAY SIGNING PLAN	07/16/99	
3824 - COMPLETE FREEWAY SIGNING PLAN	07/16/99	
3830 - COMPLETE CONSTRUCTION ZONE TRAFFIC CONTROL PLAN	06/22/99	
3840 - DEVELOP FINAL PLANS AND SPECIFICATIONS	07/02/99	
3850 - DEVELOP STRUCTURE FINAL PLANS AND SPECIFICATIONS	07/29/99	
3870 - HOLD OMISSIONS/ERRORS CHECK (OEC) MEETING	07/13/99	
4120 - OBTAIN PRELIMINARY TITLE COMMITMENTS	06/29/99	
4130 - PREPARE MARKED FINAL R.O.W. PLANS	06/29/99	
4140 - PREPARE PROPERTY LEGAL INSTRUMENTS	06/29/99	
5010 - CONSTRUCTION PHASE ENGINEERING ASSISTANCE	07/29/99	

ATTACHMENT D
CS 52044 – JN 60515C
US-41 BR (WASHINGTON STREET), CITY OF MARQUETTE

VIDEO PHOTOGRAPHY SCOPE OF WORK

NOTES: The consultant shall discuss the scope of this video photography with the MDOT Project Manager before initiating any work on this project. A detailed Work Plan with estimate of hours **must** be included in the project proposal. This scope of work shall be part of **P/PMS TASK 3360**.

Limits of videotaping storm sewer

**GENERAL CONDITIONS AND SPECIFICATIONS FOR VIDEO RECORDING
STORM SEWERS:**

1. All storm sewers affected by construction along **location** (as stated above) will be video recorded. Although not limited to the following, the majority of storm sewers range in size from **15"** to **36"** in diameter.
2. Video recordings shall be performed during minimal storm water flow periods in order to maximize picture quality. The television camera and lighting shall be specifically designed for storm sewer inspection and recording. All video recordings shall be in VHS color.
3. The consultant or contractor shall provide labor, equipment, and material to clean each storm sewer necessary in order to video record a clear, precise picture of the storm sewer conditions. For the disposal of the waste generated from the cleaning refer to Supplemental Specification 403(1). The labor, equipment, and materials necessary for the cleaning shall include removal, transportation, and disposal of the debris at no extra cost. **The Department shall not be held liable for the loss or damage to any of the contractor=s labor, equipment, or materials.**
4. The camera shall be moved through the line, in either direction, at a rate no greater than 9.144-meters (30-feet) per minute. Stopping may be necessary to properly document the sewer=s condition. Winches, TV Cable, rewind, and other devices must not obstruct the camera view or interfere with proper documentation. If during the inspection, the camera will not pass through an entire section, the contractor shall set up his equipment to enter from the opposite opening. If again, the camera fails to pass through, the inspection shall be considered complete. The camera shall be capable of rotating from side to side to provide views of joint openings.

5. Traffic control and traffic control devices to videotape shall be provided by the consultant or its contractor.
6. The contractor shall observe good housekeeping practices at all times during his operations at no extra cost.
7. In the event hazardous materials become an issue; testing and disposal fees will be negotiated separated to this agreement.

FINAL DELIVERABLES

The consultant shall provide, the Department **three (3)** copies of the video recording and written reports. Measurements of the total sewer length and locations of noted sewer defects shall be recorded on the video tape **and** on the written report describing the findings. **The consultant shall include in the written report, recommendations of storm sewer areas that need to be reconstructed. Based on these findings, MDOT will determine at which location storm sewers will be reconstructed.**

Video tapes and reports will be submitted to the MDOT Project Manager two (2) weeks prior to Base Plan submittal. The tapes shall be edited and have audio production. Once submitted, title to the tape recordings shall become the property of the Department.

ATTACHMENT E
C.S. 52044 - J.N. 60515C
US-41 BR (WASHINGTON STREET), CITY OF MARQUETTE

REAL ESTATE TASKS

These task descriptions should be used to complete this project only and are located on the MDOT Bulletin Board System under the D_CONSLT Library.

Consultants are encouraged to review and provide comment on the task descriptions.

ATTACHMENT F
CS 52044 – JN 60515C
US-41 BR (WASHINGTON STREET) CITY OF MARQUETTE

P/PMS Task Combined Manual

The MDOT P/PMS Task Combine Manual is now listed on the MDOT Bulletin Board System and can be found under the PPMS library. An index of the latest version of the task descriptions along with any revisions will be included as part of this authorization.

Vendors are still encouraged to review and provide comment on the draft pages from the MDOT P/PMS Task Combined Manual. Please send suggestions to:

Patricia A. Schafer
Administrative Products Supervising Engineer
Design Division
Michigan Department of Transportation
425 West Ottawa
P.O. Box 30050
Lansing, MI 48909